

CURRICULUM VITAE

Irina P. Panyushkina

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EDUCATION

Ph.D. 1997 Forest Ecology
V.N. Sukachev Institute of Forest, Russian Academy of Sciences, Krasnoyarsk, Russia
M.S. 1990 Geography
B.S. 1986 Biology
State Teacher Training University, Krasnoyarsk, Russia

HONORS

Visiting Fellow Chinese Meteorological Administration, Urumqi, China (2017)
Visiting Fellow RAN Institute of Archaeology, Moscow, RU (2015)
Visiting Fellow CCRC, University of New South Wales, AU (2014)
Visiting Fellow Institute of Plant Protection and Quarantine, Almaty, KZ (2011, 2013)
Visiting Fellow CCR, University of Wisconsin, USA (2007)
Visiting Fellow University of Colorado, USA (2006)
Visiting Scholar University of Arizona, USA (2000-2002)
J. W. Fulbright Fellow (1998)
Siberian Branch of Russian Academy of Sciences Award for Excellence, RU (1998)
Krasnoyarsk Research Center Fellowship, RU (1996, 1997, 1999)
Visiting Scholar, Krupskaya Teacher Training University, St. Petersburg, RU (1991)
Graduation with Highest Honors and Distinction, STTU, Krasnoyarsk, RU (1990)

PROFESSIONAL ORGANIZATIONS

American Geophysical Union
Tree-Ring Society
Tucson Association of Realtors

EMPLOYMENT HISTORY

<u>From</u>	<u>To</u>	<u>Employer</u>	<u>Position</u>
2018	Present	Omni Homes International, Tucson AZ	Realtor
2015	2017	Aberystwyth University, Wales UK	Consultant
2014	2015	LTRR, University of Arizona, Tucson AZ	Associate Research Professor
2014	2010	LTRR, University of Arizona, Tucson AZ	Assit. Research Professor
2006	2002	LTRR, University of Arizona, Tucson AZ	Research Associate

1997	1999	SBRAS Institute of Forest, Krasnoyarsk RU	Research Specialist
1992	1997	SBRAS Institute of Forest, Krasnoyarsk	Research Assistant
1998	1999	State Teacher Training University, Krasnoyarsk	Associate Professor
1995	1997	State Teacher Training University, Krasnoyarsk	Lecturer
1990	1994	State Teacher Training University, Krasnoyarsk	Teaching Assistant

Current Status at LTRR, University of Arizona: Adjunct Associate Research Professor

AREAS OF INTEREST

Research:

Climate Change, Environmental Reconstruction, Water Resources, Impact of Climate and Environmental Change on Society

Teaching:

Dendrochronology, Paleoclimatology, Tools and Methods for Absolute Dating

Consulting:

Dendrochronology, Climate Change Services, Hydroclimatic Modeling related to Water Resources, Disturbances of Boreal Forests, Environmental Archaeology Research, Radiocarbon Dating

RESEARCH ACTIVITY

Broadly trained physical geographer specialized in dendrochronology, paleoclimatology, forest ecology and environmental archaeology. The majority of projects address to assessment of environmental and climate change with tree-ring proxies. Current research focuses on understanding past climate-human society interactions and learning about adaptations of past human societies to environmental change related to water resources and forestry. Published over 50 peer-reviewed articles, 16 book chapters, and presented at 98 conferences. Current particular interest includes:

- Tipping points of climatic transitions
- Holocene hydroclimatic variability
- Subfossil wood deposits
- Wood anatomy response to climate
- Terrestrial evidence of past extreme cosmic events
- Chronology of archaeological cultures in Eurasia
- Climate change impact on sustainability of ancient farmers
- Antiquity migrations in Eurasian Steppe

RESEARCH FUNDING

Developed and directed over a dozen international research projects funded by the U.S. National Science Foundation, the CRDF Global-U.S. State Department, and other agencies.

<u>Year</u>	<u>Grantor</u>	<u>USD Amount, / Role</u>	<u>Short Title of Project</u>
2018	CRDF-Global	49,357 /Co-PI	Tree-Ring Proxy of Flood History
2017	UA-IRPD	30,000 /Co-PI	International Research in Hydrology
2015	British Council	463,109 /Cnslt	Lake Balkhash Hydrology
2015	CRDF-Global	7,474 /PI	Ob River Hydrology
2015	KZ-STF	81,000 /IE	Apple Forest Disturbance in Tian Shan
2014	I-CARES	35,000 /Co-PI	Medieval Environmental Sustainability
2012	CRDF-Global	30,636 /Co-PI	Past History of Ob River Flow
2012	KZ-STF	\$130,000 /IE	Forest Monitoring in Tian Shan
2011	NSF P2C2	598,430 /PI	Deglacial Non-stationary Environments
2011	NSF Archaeometry	152,964 /PI	Climate and Bronze-Iron Age Societies
2011	NSF P2C2	145,833 /Co-PI	Late Pleistocene Climate Change
2009	CRDF-Global	40,000 /Co-PI	Climate Impact on Siberian Forest
2007	NGC	25,000 /Co-PI	Eurasian Chronology of Bronze Age
2002	NSF P2C2	244,174 /PI	Younger Dryas Abrupt Climate Change
2002	NSF Archaeometry	235,714 /PI	Iron Age Chronology of Inner Eurasia

FIELD EXPEDITIONS

<u>Year</u>	<u>Region</u>	<u>Role</u>
2018	Ob River and Siberian Arctic, Russia	Member
2011-18	Central Asia, Kazakhstan	Director
2015	Pamir Mountains, Uzbekistan	Member
2013	Ob River and Siberian Arctic, Russia	Member
2009	Lake Baikal, Russia	Member
2008	New Mexico, USA	Member
2007	South Ural Mountains, Kazakhstan and Russia	Director
2001-15	Great Lakes, USA	Director
2013-15	Volga River headwaters, Russia	Member
2003	Tian Shan Mountains, Kazakhstan	Member
1998-05	Altai Mountains, Russia and Kazakhstan	Director
1997	Lake Baikal, Russia	Member
1995-96	Yenisei River, Russia	Member

TEACHING ACTIVITY

GEOGRAPHY UNDERGRADUATE COURSES THOUGHT AT UNIVERSITY IN RUSSIA

<u>Year</u>	<u>Topic</u>
1991	Cartography, Geology
1992-3	Meteorology, Hydrology, Geomorphology
1993-4	Physical Geography of Land and Oceans

1995	Regional Physical Geography (Siberia)
1996-7	Introduction to Physical Geography
1997-99	Biogeography

RECENT SHORT COURSES DEVELOPED BY INVITATION

“Application of Dendrochronology to Water Resources Management”

British Council funded 8-lecture short course for honored graduate students and young scientists, *Jun 2016, Almaty, Kazakhstan.

“Quaternary Science of the Great Lakes Area: Concepts and Tools”

Kazakhstan U.S. NSF funded 6-lecture short course for upper-level undergraduate students from U.S. Midwest colleges.

*Jun 2013, Illinois State Museum, Springfield, IL, USA.

*May 2014, Kenosha Public Museum, WI, USA.

“Catchment Management, Water Resources and Climate Change”

Kazakh Institute of Oil and Gas funded 20-lecture course for honored graduate and post-graduate students. *Nov 2013, Almaty, Kazakhstan.

SCHOLARLY AND PROFESSIONAL ACTIVITIES

INVITED SPEAKER (LECTURER)

Summer Presession Courses in Dendrochronology, University of Arizona (2018, 2017)
 Institute of Tibetan Plateau Research, Chinese Academy of Sci., Beijing (2017)
 Lanzhou University, College of Earth and Environmental Sciences, China (2017)
 Institute of Desert Meteorology, Chinese Meteorological Administration, Urumqi (2017)
 Siberian Federal University, Krasnoyarsk, Russia (2017)
 RAS Institute of Plant and Animal Ecology, Yekaterinburg, Russia (2015)
 Seminar at Agricultural and Biosystems Engineering Dept., University of Arizona (2015)
 LTRR Docent Trainig Lecture, University of Arizona (2015)
 CCRC University of New South Wales, Sydney, Australia (2014)
 RAS Institute of Archaeology, Moscow, Russia (2013)
 Institute of Plant Protection and Quarantine, Almaty, Kazakhstan (2012, 2013)
 Center for Climatic Research, University of Wisconsin, Madison (2007)
 Helmholtzzentrum: Institute for Chemistry and Dynamics of Geosphere, Juelich (2007)
 Anthropology Department, University of Colorado, Boulder (2006)
 State Hermitage Museum, St. Petersburg, Russia (2006)
 The Field Museum of Natural History, Chicago (2005)
 Institute of Geography, Almaty, Kazakhstan (2000)
 INSTAAR Seminar, University of Colorado, Boulder (1999)

INVITED EXPERT/ WORKSHOP PARTICIPANT

Scientific Expertise Committee at Kazakh Foundation for Sci. and Technology (since 2012)

Reviewer for NSF BCS, OPP and ATM Divisions (since 2010)
IntCal and Dendrochronology Workshop, Ottawa, Canada (2017)
Conference “RussDendro-2017”, Barnaul, Russia (2017)
PAGES workshop on Overcoming reductionism..., Krasnoyarsk, Russia (2017)
NSF Earth Systems History Workshop, Washington D.C. (2005)

SESSION ORGANIZER

Climate and Society, 9th Int. Conference on Dendrochronology, Melbourne AU (2014)
Midwest Friends of Pleistocene Field trip on Late-Glacial History of Wisconsin (2007)

PEER REVIEWING FOR PROFESSIONAL JOURNALS

Canadian Journal of Forest Research
Climate of the Past
Climatic Change
Climate Dynamics
Dendrochronologia
Dendrobiology
Forests
Global and Planetary Change
Geological Society of America Books
Quaternary Research
Quaternary Science Reviews
Quaternary International
International Journal of Biometeorology
Nature
PLOS ONE
PNAS
Radiocarbon
Siberian Journal of Ecology
SFU Journal of Biology
The Holocene
Tree-Ring Research

RESEARCH PRODUCTIVITY

Journal papers: 51
Book chapters: 16
Conference abstracts: 98
Other products: 4

ARTICLES IN PEER-REVIEWED JOURNALS

In review

51. Chen F., Shang H., **Panyushkina I.P.**, Meko D., Yu S., Yuan Y., Fahu Chen F., 2018 (revised). Tree-ring reconstruction of Lhasa River streamflow reveals hydrologic changes on southern Tibetan Plateau. *Journal of Hydrology*.

50. Churakova O.V., Fonti M.V., Saurer M., Guillet S., Corona C., Fonti P., Kirdyanov A.V., Myglan V.S., **Panyushkina I.P.**, Naumova O.V., Ovchinnikov D.V., Vaganov E.A., Siegwolf R.T.W., Stoffel M. 2018 (revised). Heterogeneous response of Siberian tree-ring and stable isotope proxies to the largest Common Era volcanic eruptions. *Quaternary Science Reviews*.

49. Luczaj J., Leavitt S.W., Csank A., **Panyushkina I.P.**, Wrigth W. 2018 (revised). Comment on “Non-Mineralized Fossil Wood” by G. E. Mustoe, *Geosciences*.

Published

2018

48. Belokopytova L.V., Babushkina E.A., Zhirnova D.F., **Panyushkina I.P.**, Vaganov E.A. 2018. Tracheidograms catch intra-seasonal temperature and precipitation signal with high resolution in drought-susceptible sites. *Trees*, doi.org/10.1007/s00468-018-1772-2

47. Belokopytova L.V., Babushkina E.A., Zhirnova D.F., **Panyushkina I.P.**, Vaganov E.A., 2018. Climatic response of conifer radial growth in the forest-steppes of South Siberia: comparison of three approaches. *Contemporary Problems of Ecology* 11(4):366-376. Doi: 10.1134/S1995425518040030. RU-EN

46. Buentgen U., Wacker L., Galvan D., Arnold S., Arseneault D., Baillie M., Beer J., Bernabei M., Bleicher N., Boswijk G., Bräuning A., Carrer M., Ljungqvist F., Cherubini P., Christl M., Christie D., Clark P., Cook E., Rosanne D'Arrigo R., Davi N., Eggertsson O., Esper J., Fowler A., Gedalof Z., Gennaretti F., Griessinger J., Grissino-Mayer H., Grudd H., Gunnarson B., Hantemirov R., Herzig F., Hessl A., Heussner K.-U., Jull T., Kukarskikh V., Kirdyanov A., Kolar T., Krusic P., Kyncl T., Lara A., LeQuesne C., Linderholm H., Loader N., Luckman B., Miyake F., Myglan V., Nicolussi K., Oppenheimer C., Palmer J., **Panyushkina I.**, Pederson N., Rybnicek M., Schweingruber F., Seim A., Sigl M., Churakova (Sidorova) O., Speer J., Synal H.-A., Tegel W., Treydte K., Villalba R., Wiles G., Wilson R., Winship L., Wunder J., Yang B., Young G. 2018. Tree rings reveal globally coherent signature of cosmogenic radiocarbon events in 774 and 993 CE. *Nature Communication*, Sept 6, Doi: 0.1038/s41467-018-06036-0.

45. Jull A.J.T., **Panyushkina I.P.**, Miyake F., Masuda K., T. Nakamura, Lange T.E., Cruz R.J., Baisan C., Janovics R., Varga T., Molnár M. 2018. More rapid carbon-14 excursions in the tree-ring record: A record of different kind of solar activity at about 800 BC? *Radiocarbon*, 60(4):1237-1248. doi:10.1017/RDC.2018.53

44. Mühlmann B., Jones T.C., Damgaard P.B., Allentoft M.E., Shevnina I., Logvin A., Usmanova E., **Panyushkina I.P.**, Boldgiv B., Bazartseren T., Tashbaeva K., Merz V., Lau N., Smrčka V., Voyakin D., Kitov E., Orlando L., Rasmussen S., Sikora M., Vinner L., Osterhaus A.D.M.E., Smith D.J., Glebe D., Fouchier R.A.M., Drosten C., Sjögren K.-G., Kristiansen K., Willerslev E. 2018. Ancient Hepatitis B viruses from the Bronze Age to the Medieval Period. *Nature*, doi: 10.1038/s41586-018-0097-z.

43. Damgaard P.-de-B., Marchi N., Rasmussen S., Peyrot M., Renaud G., Korneliussen T., Moreno-Mayar J.V., Pedersen M.W., Goldberg A., Usmanova E., Baimukhanov N.,

Loman V., Hedeager L., Pedersen A.G., Nielsen K., Afanasiev G., Akmatov K., Aldashev A., Alpaslan A., Baimbetov G., Bazaliiskii V.I., Beisenov A., Boldbaatar B., Boldgiv B., Dorzhu C., Ellingvag S., Erdenebaatar D., Dajani R., Dmitriev E., Evdokimov V., Frei K., Gromov A., Goryachev A., Hakonarson H., Hegay T., Khachatryan Z., Khashkhanov R., Kitov E., Kolbina A., Tabaldiev K., Kukushkin A., Kukushkin I., Lau N., Margaryan A., Merkyte I., Mertz I.V., Mertz V.K., Mijiddorj E., Moiyesev V., Mukhtarova G., Nurmukhanbetov B., Orozbekova Z., **Panyushkina I.P.**, Pieta K., Sćmrka V., Shevnina I., Logvin A., Štolcová T., Tashbaeva K., Tkachev A., Tulegenov T., Voyakin D., Yepiskoposian L., Undrakhbold S., Varfolomeev V., Weber A., Kradin N., Allentoft M.E., Orlando L., Nielsen R., Sikora M., Heyer E., Kristiansen K., Willerslev E., 2018. 137 ancient human genomes from across the Eurasian steppes. *Nature*, doi: 10.1038/s41586-018-0094-2

42. **Panyushkina I.P.**, Meko D.M., Macklin M.G., Toonen W.H.J., Mukhamedeiv M.M., Konovalov V.G., Ashikbaev N.Z., Sagitov A.O. 2018. Runoff variations in Lake Balkhash Basin, Central Asia, 1779 to 2015, inferred from tree rings. *Climate Dynamics* 51(7): 3161-3177. doi: 10.1007/s00382-018-4072-z.

41. Usmanova E.R., Dremov I.I., **Panyushkina I.P.**, Kolbina A.V. 2018. Mongol warriors of Jochi Ulus at the Karasuyr cemetery, Central Kazakhstan [In Russian: Mongolskie voini Ulusa Juchi po materialam mogilnika Karasuyr (Ulytau, Tsentralniy Kazakhstan)]. *Archaeology, Ethnology & Anthropology of Eurasia* 46 (2): 106-113, doi: 10.17746/1563-0102.2018.46.2.106-113. RU-EN

2017

40. **Panyushkina I.P.**, Mukhamadiev N.S., Lynch A.M., Ashikbaev N.Z., Arizpe A.H., O'Connor C.D., Abjanbaev D., Mengdibayeva G.Z., Sagitov A.O. 2017. Wild apple growth and climate change in southeast Kazakhstan. *Forests* 8 (11), 406, doi:10.3390/f8110406.

39. Büntgen U., Kirdyanov A., Vaganov E.A. and others, 2017. Overcoming reductionism when linking climate variability with human history –a cross-disciplinary approach in the Altai Mountains. *Past Global Changes Magazine: Sustaining Earth Biodiversity*, 25(2),113.

38. **Panyushkina I.P.**, Leavitt, S.W., Mode W. 2017. A 1400-yr Bølling-Allerød tree-ring record from Great Lakes region. *Tree-Ring Research* 72 (2): 102-112. doi: 10.3959/1536-1098-73.2.102

37. Miyake F., Jull A.J.T., **Panyushkina I.P.**, Wacker L., Salzer M., Baisan C., Lange T., Cruz R., Masuda K., Nakamura T. 2017. Large ^{14}C excursion in 5480 BC indicates an abnormal sun in the mid-Holocene. *PNAS Physical Sciences - Earth, Atmospheric, and Planetary Sciences* 114 (3), doi:10.1073/pnas.161314411

36. Miyake F., Masuda K., Nakamura T., Kimura K., Hakozaki M., Jull A.T., Lange T., Cruz R., **Panyushkina I.P.**, Baisan C., Salzer M. 2017. Search for annual ^{14}C excursions in the past. *Radiocarbon* 59 (2): 315-320. DOI: 10.1017/RDC.2016.54

2016

35. Agafonov L.I., Meko D., **Panyushkina I. P.** 2016. Reconstruction of Ob River, Russia, from ring widths of floodplain trees. *Journal of Hydrology* 543: 198-217. DOI: 10.1016/j.jhydrol.2016.09.031

34. **Panyushkina I.P.**, Shishov V.V., Grachev A.M., Knorre A.A., Kirdyanov A.V., Leavitt S.W., Vaganov E.A., Chebykin E.P., Zhuchenko N.A., Hughes M. 2016. Trends in elemental concentrations of tree rings from the Siberian Arctic. *Tree-Ring Research* 72 (2): 13-16. Doi: 10.3959/1536-1098-72.02.67

33. **Panyushkina I.P.**, Karpukhin A.A., Engovatova A.V. 2016. Moisture record of the Upper Volga catchment between AD 1430-1600 supported by a $\delta^{13}\text{C}$ tree-ring chronology of archaeological pine timbers. *Dendrochronologia* 39: 24-31, 10.1016/j.dendro.2016.02.002

32. **Panyushkina I.P.**, Slyusarenko I.V., Deom J.-M., Sala R., Toleubaev A. 2016. Calendar age of the Baigetobe kurgan from the Iron Age Saka cemetery at Shilikty Valley, Kazakhstan. *Radiocarbon*, DOI: 10.1017/RDC.2015.15

2015

31. Macklin M.G., **Panyushkina I.P.**, Toonen W.H.J., Chang C., Tourtellotte P.A., Duller G.A., Wang H., Prins M. 2015. The influence of Late Pleistocene geomorphological inheritance and Holocene hydromorphic regimes on floodwater farming in the Talgar catchment, southeast Kazakhstan, Central Asia. *Quaternary Science Review* 129:85-95, 10.1016/j.quascirev.2015.10.020.

30. Voelker S.L., Brooks R.J., Meinzer F.C., Anderson R., Bader M. K.-F., Battipaglia G., Becklin K.M., Beerling D., Bert D., Betancourt J.L., Dawson T.E., Domec J.-C., Guyette R.P., Körner C., Leavitt S.W., Linder S., Marshall J.D., Mildner M., Ogée J., **Panyushkina I.P.**, Plumpton H.J., Pregitzer K.S., Saurer M., Smith A.R., Siegwolf R.T.W., Stambaugh M.C., Talhelm A.F., Tardif J.C., Van de Water P.K., Ward J.K., Wingate L. 2016. A dynamic leaf gas-exchange strategy is conserved in woody plants under changing ambient CO_2 : evidence from carbon isotope discrimination in paleo and CO_2 enrichment studies. *Global Change Biology*. doi: 10.1111/gcb.13102

29. **Panyushkina I.P.**, Leavitt S.W., Domack E.W., Wiedenhoeft A.C. 2015. Tree-ring investigation of Holocene flood-deposited wood from the Oneida Lake watershed, New York State. *Tree-Ring Research* 71(2): 83-94. Doi: 10.3959/1536-1098-71.2.83

28. Voelker S.L., Stambaugh M.C., Guyette R.P., Feng X., Grimley D.A., Leavitt S.W., **Panyushkina I.P.**, Grimm E.C., Marsicek J.P., Shuman B., Curry B.B. 2015. Deglacial hydroclimate for Midcontinental North America. *Quaternary Research* 83 (2): 336-344, doi:10.1016/j.yqres.2015.01.001

2014

27. Jull A.J.T., **Panyushkina I.P.**, Lange T.E., Kukarskikh V.V., Clark K.J., Myglan V.S., Salzer M., Burr G.S., Leavitt S.L. 2014. Excursions in the ^{14}C record at AD 774-775 from tree rings from Russia and America. *Geophysical Research Letters* 41 (8): 3004–3010. 10.1002/2014GL059874

2013

26. **Panyushkina I.P.**, Grigoriev F., Lange T., Alimbay N. 2013. Radiocarbon and tree-ring dates of the Bes-Shatyr #3 Saka kurgan in the Semirechiye, Kazakhstan. *Radiocarbon* 55 (3-4): 1297-1303. Doi: 10.1017/RDC.2015.15

25. Vaganov E.A., Grachev A., Shishov V., **Panyushkina I.**, Leavitt S.W., Knorre A., Chebykin E., Menyailo O.V. 2013. Elemental composition in dendrochronology as a prospective approach for biogeochemical studies. *Doklady Biological Sciences* 453 (6): 1-5. DOI: 10.7868/S0869565213360279

24. Grachev A., Vaganov E.A., Leavitt S.W., **Panyushkina I.**, Chebykin E., Shishov V., Zhuchenko N., Knorre A., Hughes M. H., Naurzbaev M. 2013. Methodology for development of a 600-year tree-ring multi-element record of larch from the Taymir Peninsula, Russia. *J. Siberian Federal University, Biology* 1(6): 61-72. 550.47+630*561.24

23. **Panyushkina I.P.**, Leavitt S.W. 2013. Ancient boreal forests under the environmental instability of the glacial to post-glacial transition in the Great Lakes region (14,000-11,000 years BP), *Canadian Journal of Forest Research* 43 (11): 1032-1039. doi: 10.1139/cjfr-2012-0339

2012

22. **Panyushkina I.P.** 2012. Climate-induced changes in population dynamics of Siberian Scythians (700-250 BC), in *Climates, Landscapes, and Civilizations*. Eds. L. Giosan et al., *Geophys. Monogr. Ser.*, vol.198: 145-154, AGU, Washington D. C.

2010

21. **Panyushkina I.**, Leavitt S.W. 2010. Tapping Ancient Tree-Ring Archives in the U.S. Great Lakes Region. *Eos, Transactions, American Geophysical Union*: 91(50): 489-90.

20. **Panyushkina I.P.**, Chang C., Clemens A., Bykov N. 2010. First tree-ring chronology from Andronovo archaeological timbers of Bronze Age in Central Asia. *Dendrochronologia* 28(1): 13-21.

2008

19. **Panyushkina I.P.**, Leavitt S.W., Schneider A.F., Thompson T.A., Lange T. 2008. Environment and paleoecology of a 12 ka mid-North American Younger Dryas forest chronicled in tree rings. *Quaternary Research* 70: 433-441.

18. **Panyushkina I.P.**, Mills B.J., Usmanova E.R., Cheng L., 2008. Calendar age of Lisakovsky timbers attributed to Andronovo community of Bronze Age in Eurasia. *Radiocarbon* 50 (3): 459-469.

2007

17. Leavitt S.W., **Panyushkina I.P.**, Lange T., Cheng L., Schneider A.F., Hughes J. 2007. Radiocarbon “wiggles” in Great Lakes wood ca. 10,000 to 12,000 BP. *Radiocarbon* 49(2): 855-865.

16. **Panyushkina I.P.**, Sljusarenko I.Y., Bikov N.I., Bogdanov E. 2007. Floating larch tree-ring chronologies from archaeological timbers in the Russian Altai between 800 BC and 800 AD. *Radiocarbon* 49(2): 693-702.

2006

15. Leavitt S.W., **Panyushkina I.P.**, Lange T., Wiedenhoeft A., Cheng L., Hunter R.D., Hughes J., Pranschke F., Schneider A.F., Moran J., Stieglitz R. 2006. Climate in the

Great Lakes region between 14,000 and 4,000 years ago from isotopic composition of conifer wood. *Radiocarbon* 48 (2): 205-217.

14. Hunter R.D., **Panyushkina I.**, Leavitt S.W., Wiedenhoeft A.C., Zawiskie J. 2006. A multiproxy environmental investigation of Holocene wood from submerged conifer forest in Lake Huron, USA. *Quaternary Research* 66 (1): 67-77.

2005

13. **Panyushkina I.P.**, Ovtchinnikov D.V., Adamenko M.F. 2005. Mixed response of decadal variability in larch tree-ring chronologies from upper tree-lines of Russian Altai. *Tree-Ring Research* 61 (1): 33-42. doi:10.3959/1536-1098-61.1.33

2004

12. **Panyushkina I.P.**, Leavitt S.W., Wiedenhoeft A., Noggle S., Curry B., Grimm E. 2004. Tree-ring records of near-Younger Dryas time in Central North America- preliminary results from the Lincoln quarry site, central Illinois, USA. *Radiocarbon* 46 (2): 933-941.

2003

11. **Panyushkina I.P.**, Hughes M.K., Vaganov E.A., Munro M.A.R. 2003. Summer temperature in northeastern Siberia since 1642 reconstructed from tracheids dimensions and cell numbers of *Larix cajanderi*. *Canadian Journal of Forest Research* 33: 1-10.

2002

10. Ovtchinnikov D.V, **Panyushkina, I.P.**, Adamenko, M.F. 2002. A 1,000-year tree-ring chronology of larch in the Altai Mountains and its application to summer temperature reconstruction. *Geography and Natural Resources* (1): 102-108 (Russian Journal).

2001

9. Danzer S.R., Leavitt S.W., **Panyushkina I.P.**, Mergner A., Garcia E., Best-Svob V. 2001. Xylem tracheid development in *Pinus resinosa* seedling in controlled environments. *Tree-Ring Research* 57 (1): 45-54. ISSN 2162-4585; 1536-1098

2000

8. Ovtchinnikov D., Adamenko M, **Panushkina I.** 2000. A 1105-year tree-ring chronology in Altai region and its application for reconstruction of summer temperature. *Geolines* 11: 121-122.

1999

7. **Panyushkina I.P.**, Ovtchinnikov D.V., 1999. Climate impact on larch radial growth in the Altai Mountains. *Russian Journal of Forestry Sciences (Lesovedenie)* 6: 22-32.

6. Vlasenko V.I., Ovchinnikova T.M., **Panyushkina I.P.** 1999. Dynamics of forest diversity in the Stolby Nature Reserve during the 20th century. *Botanical Research in Siberia* 7:54-72, IL-Krasnoyarsk Press.

5. **Panyushkina I.P.**, Arbatskaya, M.K. 1999. Dendrochronological approach to study of flammability of forests in Evenkiya (Siberia). *Siberian Journal of Ecology* 2: 167-173 (In Russian).

1997

4. Vaganov E.A., **Panyushkina I.P.**, Naurzbaev M.M. 1997. Summer temperature reconstruction in eastern Taymir for the last 840 years. *Russian Journal of Ecology* 6: 403-407.
3. **Panyushkina I.P.**, Vaganov E.A., Shishov V.V. 1997. Dendroclimatic analysis of larch increment in northern Central Siberia. *Geography and Natural Resources* (Russian Journal) 2: 80-90.

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